Market Bulletin

27 March 2020

Monitoring the global impact of COVID-19

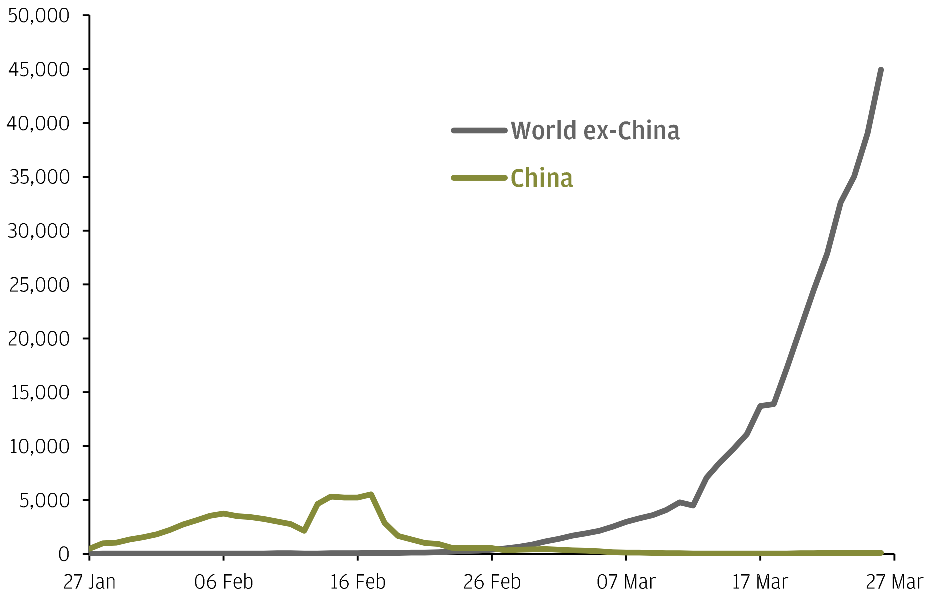
The spread of the coronavirus and its impact on global economic activity are increasingly troubling investors. Trying to predict the final outcome is a fool's errand. Instead, in this piece we provide a framework for tracking infection rates globally and monitoring the impact on economic activity, using high frequency or daily data. We then consider government and central bank interventions that might support the households and firms affected and facilitate an economic recovery, as well as providing an overview of the market reaction to date.

The clear investment implication is that, even more than usual, a well-diversified portfolio is essential. This includes diversification by region but also by asset class. Core government bonds have performed strongly. However, further upside for US Treasuries and UK gilts will be more limited from here unless these central banks shift their guidance that they do not intend to take interest rates into negative territory. Investors may wish to consider alternative diversifiers such as macro funds, or real assets if liquidity is not a requirement.

What are the latest virus statistics?

Exhibits 1-3 provide the latest data on the spread of coronavirus. The daily rate of infection has slowed markedly in China and South Korea, following the significant restrictions on travel. Whether a loosening of travel restrictions leads to a resurgence is yet to be seen. Of clear concern is the speed with which infections are increasing outside of China. There has been a notable pickup in cases across Europe and in the US.

EXHIBIT 1: COVID-19 DAILY INCREASE IN CONFIRMED CASES
Five-day moving average



Source: Johns Hopkins CSSE, J.P. Morgan Asset Management. Data as of 26 March 2020.

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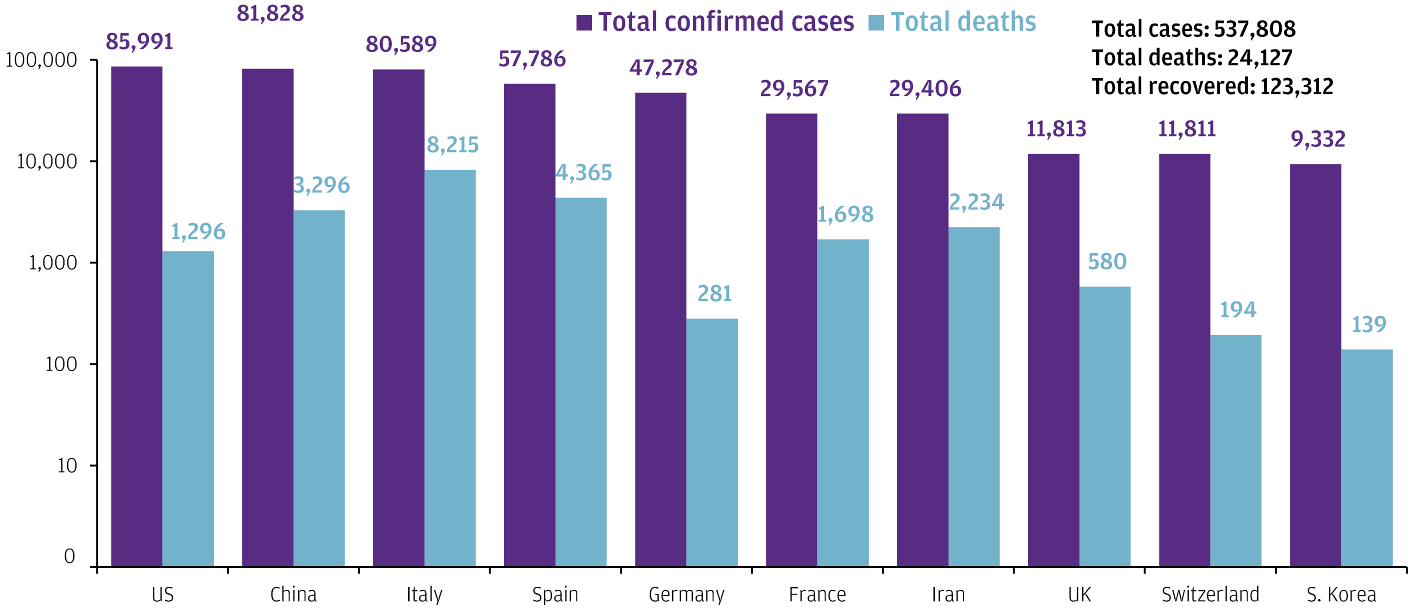
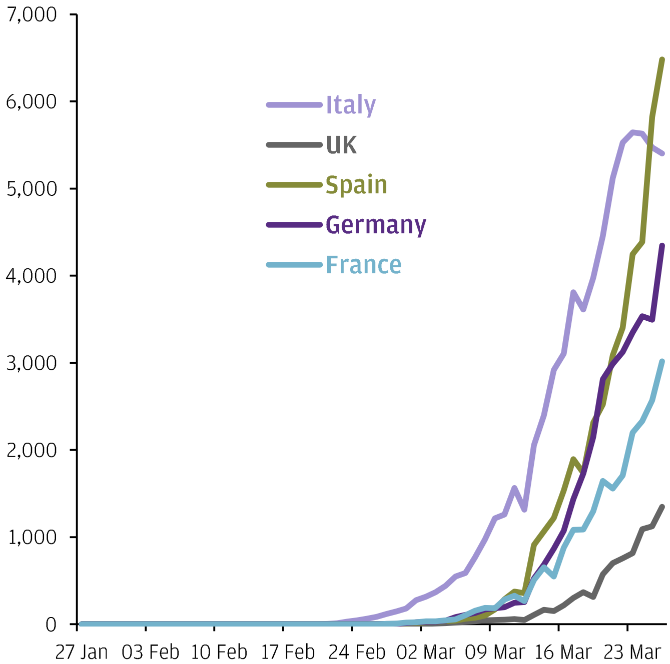
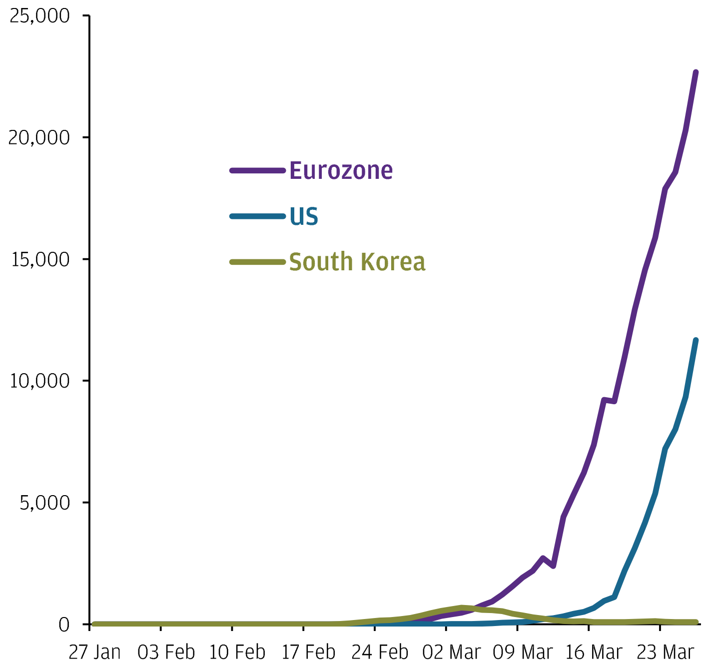
EXHIBIT 2: COVID-19 CONFIRMED CASES AND DEATHS BY COUNTRY
Log scale



Source: Johns Hopkins CSSE, J.P. Morgan Asset Management. Data as of 27 March 2020.

EXHIBIT 3: COVID-19 DAILY INCREASE IN CONFIRMED CASES
5-day moving average



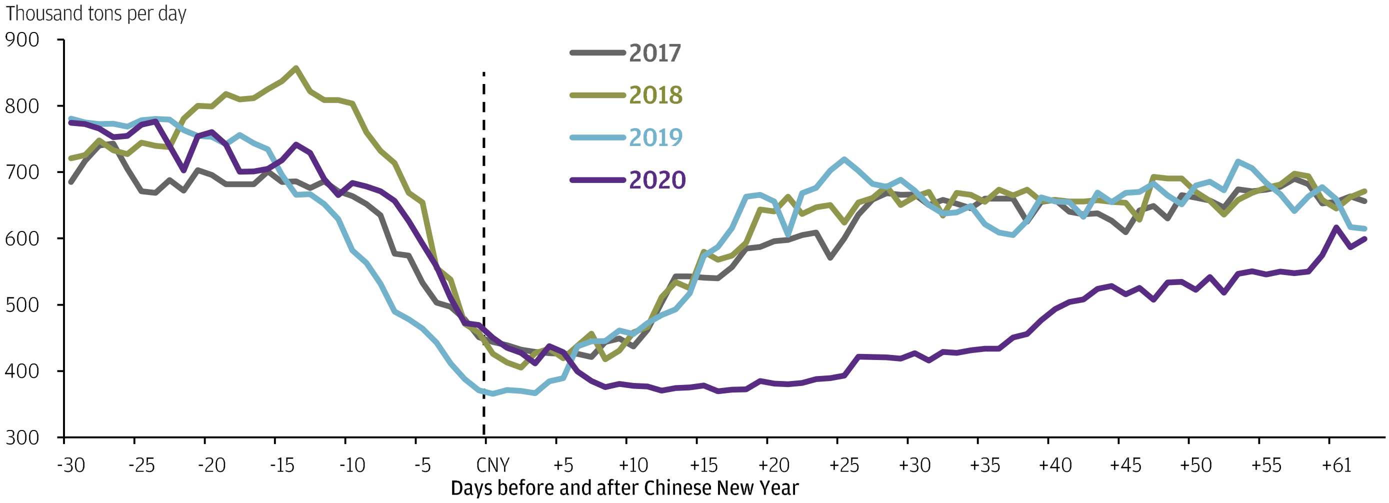


Source: Johns Hopkins CSSE, J.P. Morgan Asset Management. Data as of 26 March 2020.

How is current production being affected?

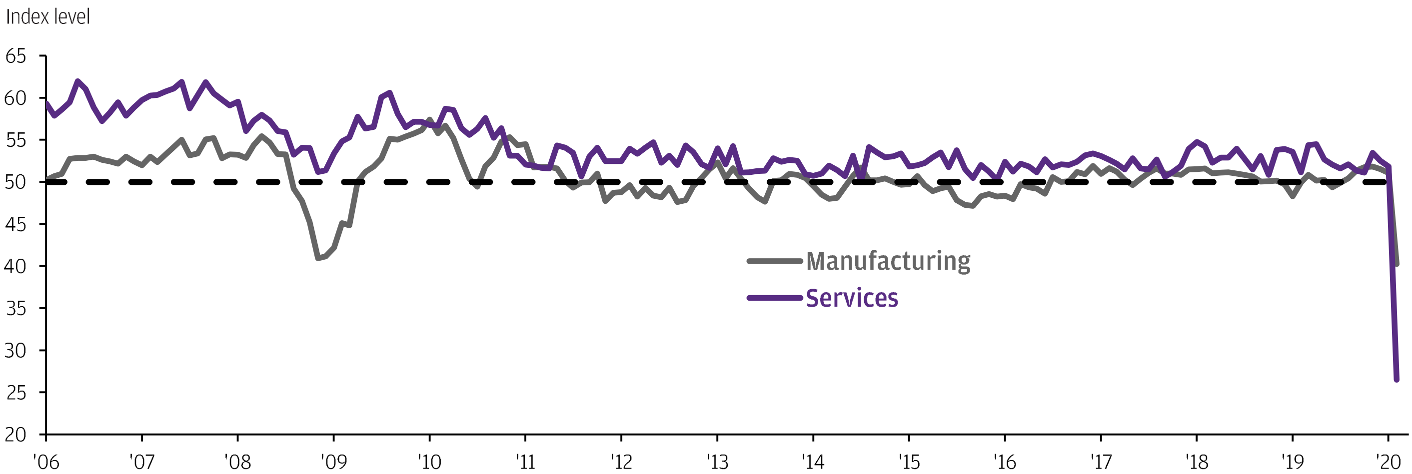
China is now slowly returning to work (**Exhibit 4**). But the implications of shutdowns and social distancing are only just beginning in the developed world. The impact on the economy will be large and broad. The manufacturing sector will be affected by lasting supply chain disruptions but the effect is likely to be most strongly felt in the services sector (**Exhibit 5**). Airlines, hotels, restaurants, cinemas and concert venues are amongst those most likely to be affected.

EXHIBIT 4: COAL CONSUMPTION IN CHINA



Source: Wind, J.P. Morgan Asset Management. CNY = Chinese New Year. Data as of 27 March 2020.

EXHIBIT 5: CHINA MANUFACTURING AND SERVICES PURCHASING MANAGERS' INDICES



Source: Markit, J.P. Morgan Asset Management. Data as of 26 March 2020.

How long the travel restrictions last depends on the spread of the virus, and the scale of preventative measures required to reduce the rate of infection. This is something we cannot predict. What we can assess is the measures policymakers are deploying to support businesses during the period of production shutdowns and weak revenues. If the measures are effective they will reduce the likelihood of a vicious cycle whereby firms cut back on staff, business investment, inventory orders and so forth. If firms are given this near-term support they will be well placed to return to business as usual when the infection rates peak. A recovery by year-end would be feasible.

What might effective stimulus look like?

In our view, the answer lies with targeted fiscal measures. This might happen via subsidies – helping a firm meet rent and wage costs. Similarly tax breaks (such as temporary relief from business rates) would allow firms to cope with a period of weak profitability. The commercial banks may also have a role to play in allowing a period of forbearance and short-term relief on debt and interest repayments.

The German short shift programme, established in the global financial crisis, was an excellent example of a policy designed to limit the medium-term fallout of a demand shock. 1.5 million German workers were moved to a short shift. But companies were subsidised by the Federal government so that the net wage loss to the end employee was reduced with no burden on the company's balance sheet. The end result was a very limited rise in overall unemployment. These short-shift regimes are being rolled out increasingly across continental Europe (**Exhibit 6**).

EXHIBIT 6: FISCAL AND MONETARY POLICY RESPONSES BY COUNTRY*

Country	Fiscal response	Monetary response
US	• *USD 1 bn in loan subsidies, enabling USD 7 bn in low-interest loans to be provided to small businesses* • *USD ~100bn (~0.5% of GDP) of stimulus that includes paid sick leave, unemployment insurance, funding for food stamps and waivers to allow coronavirus testing to be covered by insurance and federal government programmes* • *USD ~2trn (approx. 9% of US GDP) including:* • *USD 500 bn fund to help hard-hit industries* • *USD 500 bn for direct payments to U.S. families* • *USD 350 bn for small-business loans* • *USD 250 bn for expanded unemployment aid* • *USD 220 bn in business tax breaks* • *USD 150 bn in direct aid to state and municipal governments*	• Federal Funds Rate cut twice by a total of 150 bps down to a target range of 0.0 - 0.25%. First rate cuts since 2008 to take place outside of a scheduled meeting • After initially relaunching QE with a plan to buy USD 500 bn of Treasuries and USD 200 bn of mortgage-backed securities (MBS), the Fed will now purchase Treasuries and MBS "in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy" • Establishment of multiple funding facilities to support the flow of credit to employers, consumers and businesses (including through the purchase of investment grade corporate bonds and ETFs via Special Purpose Vehicles) • Six major central banks agreed to lower the pricing on standing U.S. dollar liquidity swap arrangements by 25bps and to increase the frequency of operations. This is to ensure there is sufficient U.S. dollar funding available internationally
Europe	• European Commission is creating a EUR 37 bn fund directed at vulnerable parts of the economy	• Interest rate on the TLTRO loan programme will be lowered from June 2020 for one year to encourage favourable lending conditions to small and medium size businesses. Extra funds have also been made available to draw down • An additional EUR 120 billion to be deployed as part of the asset purchase programme by the end of 2020 • Introduced a new emergency pandemic asset purchase programme of EUR 750 billion to be used in 2020. This will cover both sovereign and corporate purchases. The ECB stated they can revise their self imposed purchase limits too

France	• EUR 45 bn stimulus package (1.9% of GDP):
	  • EUR 35 bn to fund reduced social security contributions
	  • EUR 8.5 bn to fund state insurance to cover forced part-time employment by eligible businesses
	  • EUR 2bn as a solidarity fund for self-employed and shopkeepers
	• EUR 300bn guarantee for bank loans to companies, and housing and utility payments suspended	

Germany	• Ministers are seeking authorization to suspend the "debt brake" that has limited government borrowing to 0.35% of GDP • Government set to pass a EUR 156bn supplementary budget (~4.5% of GDP) and aiming set up a EUR 500bn bailout fund to take stakes in struggling companies • Government has committed to provide unlimited credit and liquidity support for all businesses in need • German companies to gain access to government funds, when 10% of workers are affected by work stoppage, in order to help continue paying staff	
Italy	• Preparing EUR 25bn (~1.4% of GDP) aid package including subsidies to workers, tax suspensions, utility payment postponements, renegotiation of bank loans (for companies) and mortgages (for households) and special measures for companies that lose 25% of revenues	
UK	• GBP ~90 bn (~4% of GDP) of measures to support households and small businesses, including government subsidies for workers who have lost their jobs due to the virus and the self-employed, more widespread sick pay, reduction or exemption of business rates, deferral of VAT payments, a new temporary loan scheme with government guarantee of up to 80%, and cash grants of up to GBP 25k for eligible businesses • GBP 330bn made available for government loan guarantee and credit scheme, with more if needed • UK banks to offer mortgage holidays for customers affected by the virus	• Bank of England cut interest rates by 65 bps to 0.10% (over two meetings) and introduced a new Term Funding scheme with additional incentives for Small and Medium-sized Enterprises (TFSME). Countercyclical capital buffer reduced to 0% from 1% for 12 months • GBP 200 bn increase in the bond purchasing programme, most of which will be UK Gilts, to be completed as soon as operationally possible
China	• Various government fees and charges waived or delayed (contributions to social security, medical insurance) • State Taxation Administration announced to delay the tax declaration date of March from Mar 16 to Mar 23 • VAT waiver for small business inside Hubei Province, and rate cut from 3% to 1% for small business outside of Hubei during March 1 to May 31	• People's Bank of China lowered 1-year Loan Prime Rate by 10 basis points (bps) • Non-performing loan recognition temporarily relaxed • Targeted RRR cuts of 50 bps to 100 bps, to support inclusive financing, namely SMEs, releasing RMB 550 bn • RMB 800 bn re-lending loans to SMEs, with interest subsidy
Hong Kong	• HKD 10,000 (~1,300 USD) to be given to each permanent resident aged 18 and over as part of HKD 120 bn (~4% of GDP) relief fund	• Hong Kong Monetary Authority cut its base rate twice in March by 114 bps in total to 0.86% following the Federal Reserve move to maintain currency stability under the USD-HKD currency peg
Japan	• JPY 430.8 bn (~0.08% of GDP) fiscal package (including improvements to medical facilities and subsidies to working parents and remote studies) • JPY 1.6 trillion yen of business financing support measures (including lending and guarantees for SMEs)	• Introduced one year, zero-rate repo operation against corporate debt • Outright buying of commercial paper and corporate bonds • Doubling of annual purchase limits of equity ETFs and REITs

New Zealand	• NZD 12 bn fiscal package (~4% of GDP) which includes:
	  • NZD 5 bn in wage subsidies covering a 12-week period
	  • NZD 2.8 bn in household benefits / transfer increases
	  • NZD 2.8 bn in corporate tax changes
		• Policy rate cut by 75bps to 0.25%

Source: Bloomberg, J.P. Morgan Asset Management.*Note that this table does not include government spending to support health services, but focuses on measures to support private sector activity. Fiscal measures are those announced to date. Data as of 26 March 2020.

Overall our assessment is that governments are responding in a timely manner with the appropriate polices. However the magnitude will need to increase for us to feel confident that the necessary support for the economy is in place. The packages delivered in New Zealand and Hong Kong - which are around 4-5% of GDP - look to be in the right ballpark.

Much larger fiscal deficits will of course lead to much larger bond issuance. This is where the central banks come in. Central banks must show willing to buy government debt to ensure the market can absorb this additional issuance without undue stress. Again we're encouraged by the speed with which the central bank community has reacted and the magnitude of the asset purchases and liquidity schemes that have been announced. In many cases - including the Fed, ECB and BoJ - the packages that have been announced exceed those delivered during the financial crisis.

In summary, policymakers have acted decisively. The economic data in the developed world in the coming months will be truly dreadful. The market is priced for this near term shock. What will be critical are signs that the policy response is working to facilitate a bounceback later in the year once the disease is contained. Chief amongst the indicators to follow are those of hiring intentions to assess whether policies are serving to shore up the labour market.

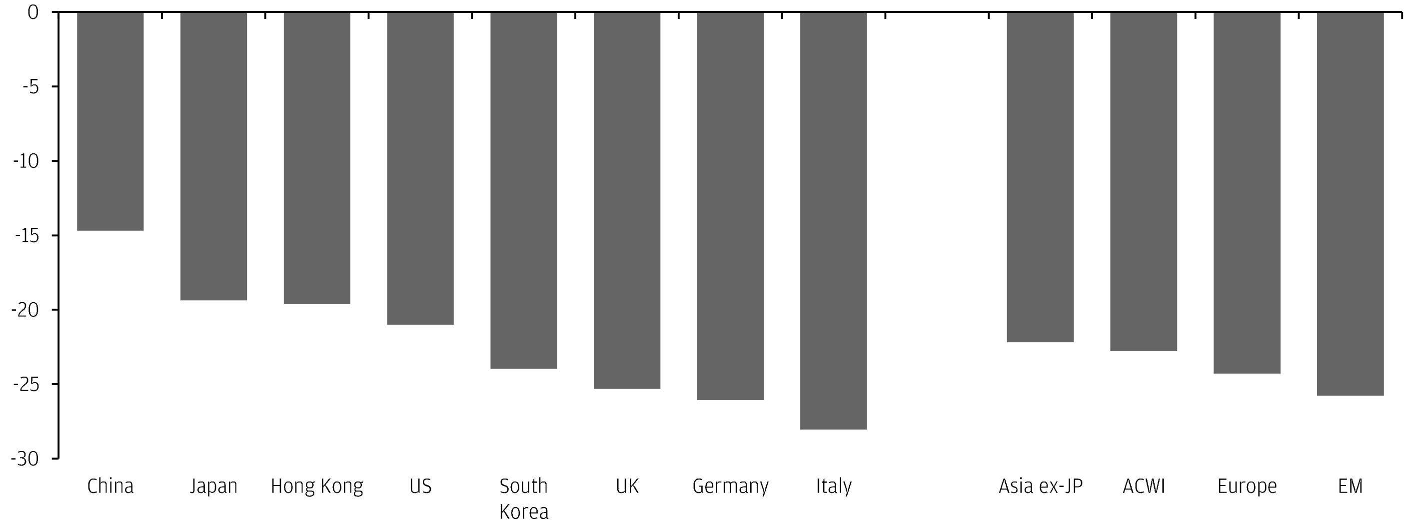
How have the markets reacted?

Markets have rapidly repriced given the deterioration in the outlook. Indeed this sell-off is not remarkable in its magnitude but it is in terms of speed. Energy heavy benchmarks - such as the UK market - have been hit most heavily, given the collapse in oil prices. Some of the Asian markets are seeing tentative signs of recovery as the worst of the virus seems, for now at least, to be behind them.

EXHIBIT 7: MARKET REACTION

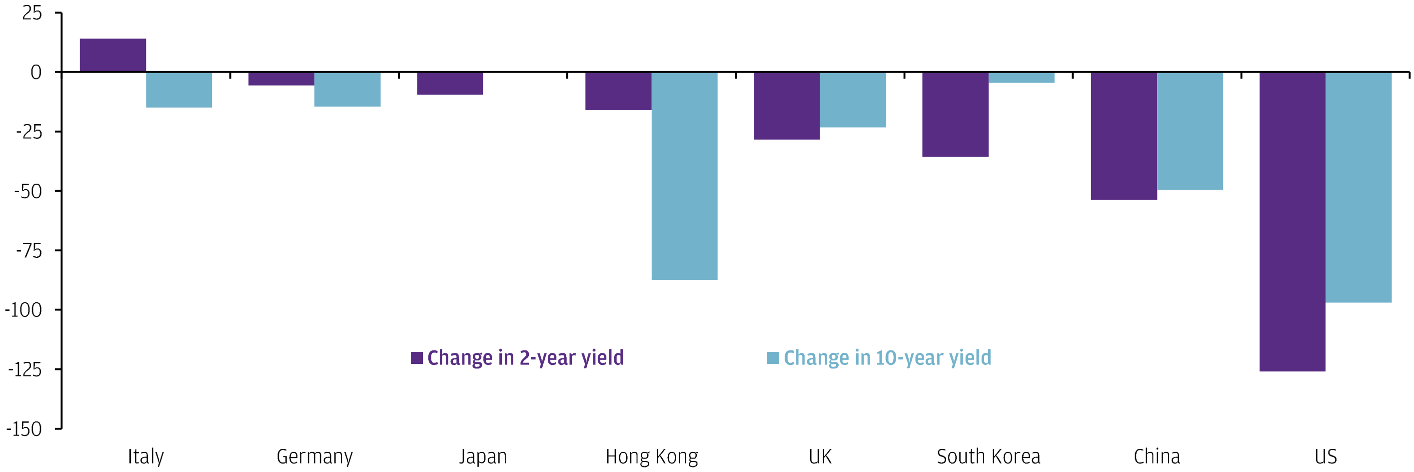
EQUITY MARKETS

% stock market price returns since 17 Jan 2020, local currency unless specified



GOVERNMENT BOND MARKETS

Basis point change in yield since 17 Jan 2020



Source: (Top) Bloomberg, DAX, FTSE, Hang Seng, MSCI, Standard and Poor's, TOPIX, J.P. Morgan Asset Management. MSCI indices are used for China, S. Korea, Europe (EUR), ACWI (USD), Asia ex-JP (USD), EM (USD). Other indices used: Germany: DAX; Hong Kong: Hang Seng; Italy: FTSE MIB; Japan; TOPIX; UK: FTSE-All Share; US: S&P 500. (Bottom) Bloomberg, J.P. Morgan Asset Management. Past performance is not a reliable indicator of current and future results. Data as of 26 March 2020.

Conclusion

It is too early to assess the ultimate impact of the coronavirus on economic activity and corporate earnings. The sooner the virus is confidently contained, the quicker the recovery in economic activity will be, particularly given governments and central banks are acting decisively to shore up the economy and support the prospects for recovery. However, the more the virus affects activity in other regions, and the longer the period of reduced travel to restrict the transfer of the infection, the greater will be the impact on corporate earnings. For now, investors should maintain a balanced approach to asset allocation given the uncertain nature of the outbreak. Risk aversion is likely to prevail until the virus itself is contained, and/or a medical solution is forthcoming.

Core government bonds have performed strongly. However, significant further upside for US Treasuries and UK gilts will be more limited from here unless these central banks shift their guidance that they do not intend to take interest rates into negative territory. Investors may wish to consider alternative diversifiers such as macro funds, or real assets if liquidity is not a requirement.

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